



IFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/567,427  
Applicant : RIGLER et al  
Filed : February 6, 2006  
TC/A.U. : 2873  
Examiner :

Docket No. : 2923-747  
Customer No.: 6449  
Confirmation No.: 8429

**SUBMISSION OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

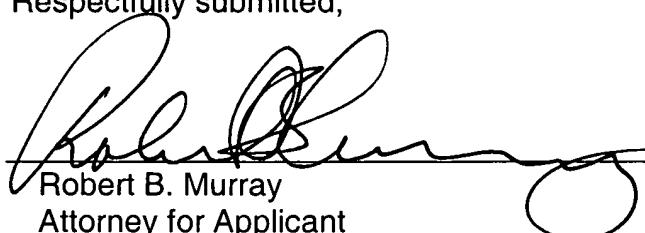
Dear Sir:

Submitted herewith is a copy of the translation of the International Preliminary Report on Patentability.

In the event that any fees are due with this paper, please charge our Deposit Account No. 02-2135.

Respectfully submitted,

By



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RBM/cb

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 30268P WO	<b>FOR FURTHER ACTION</b>	
See item 4 below		
International application No. PCT/EP2004/008847	International filing date ( <i>day/month/year</i> ) 06 August 2004 (06.08.2004)	Priority date ( <i>day/month/year</i> ) 06 August 2003 (06.08.2003)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant GNOTHIS HOLDING S.A.		

<ol style="list-style-type: none"> <li>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</li> <li>2. This REPORT consists of a total of 8 sheets, including this cover sheet.  In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</li> </ol>																								
<ol style="list-style-type: none"> <li>3. This report contains indications relating to the following items:           <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; text-align: center; padding: 5px;"><input checked="" type="checkbox"/></td> <td style="width: 15%; text-align: center; padding: 5px;">Box No. I</td> <td style="width: 70%; padding: 5px;">Basis of the report</td> </tr> <tr> <td style="text-align: center; padding: 5px;"><input checked="" type="checkbox"/></td> <td style="text-align: center; padding: 5px;">Box No. II</td> <td style="padding: 5px;">Priority</td> </tr> <tr> <td style="text-align: center; padding: 5px;"><input type="checkbox"/></td> <td style="text-align: center; padding: 5px;">Box No. III</td> <td style="padding: 5px;">Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center; padding: 5px;"><input type="checkbox"/></td> <td style="text-align: center; padding: 5px;">Box No. IV</td> <td style="padding: 5px;">Lack of unity of invention</td> </tr> <tr> <td style="text-align: center; padding: 5px;"><input checked="" type="checkbox"/></td> <td style="text-align: center; padding: 5px;">Box No. V</td> <td style="padding: 5px;">Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center; padding: 5px;"><input type="checkbox"/></td> <td style="text-align: center; padding: 5px;">Box No. VI</td> <td style="padding: 5px;">Certain documents cited</td> </tr> <tr> <td style="text-align: center; padding: 5px;"><input checked="" type="checkbox"/></td> <td style="text-align: center; padding: 5px;">Box No. VII</td> <td style="padding: 5px;">Certain defects in the international application</td> </tr> <tr> <td style="text-align: center; padding: 5px;"><input type="checkbox"/></td> <td style="text-align: center; padding: 5px;">Box No. VIII</td> <td style="padding: 5px;">Certain observations on the international application</td> </tr> </table> </li> </ol>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input checked="" type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
<input checked="" type="checkbox"/>	Box No. I	Basis of the report																						
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<input type="checkbox"/>	Box No. VIII	Certain observations on the international application																						
<ol style="list-style-type: none"> <li>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</li> </ol>																								

Date of issuance of this report 10 July 2006 (10.07.2006)	
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 338 82 70	Authorized officer  <b>Agnes Wittmann-Regis</b>  e-mail: pt06@wipo.int

## **PATENT COOPERATION TREATY**

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

		Date of mailing (day/month/year)
Applicant's or agent's file reference <b>30268P WO</b>		<b>FOR FURTHER ACTION</b> See paragraph 2 below
International application No. <b>PCT/EP2004/008847</b>	International filing date (day/month/year) <b>06.08.2004</b>	Priority date (day/month/year) <b>06.08.2003</b>
International Patent Classification (IPC) or both national classification and IPC		
Applicant <b>GNOTHIS HOLDING S.A.</b>		

1. This opinion contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion
<input checked="" type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220

3. For further details, see notes to Form PCT/ISA/220

Name and mailing address of the ISA/EP	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/008847

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
 This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
 a sequence listing  
 table(s) related to the sequence listing
  - b. format of material  
 in written format  
 in computer readable form
  - c. time of filing/furnishing  
 contained in the international application as filed.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority for the purposes of search.
3.  In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

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Box No. II Priority

1.  The following document has not yet been furnished:

copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).

translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2.  This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/EP2004/008847

Box No. V <b>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b>																									
<p>1. Statement</p> <table> <tr> <td>Novelty (N)</td> <td>Claims</td> <td>2-10</td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td>1</td> <td>NO</td> </tr> <tr> <td>Inventive step (IS)</td> <td>Claims</td> <td></td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td>1-10</td> <td>NO</td> </tr> <tr> <td>Industrial applicability (IA)</td> <td>Claims</td> <td>1-10</td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td></td> <td>NO</td> </tr> </table>		Novelty (N)	Claims	2-10	YES		Claims	1	NO	Inventive step (IS)	Claims		YES		Claims	1-10	NO	Industrial applicability (IA)	Claims	1-10	YES		Claims		NO
Novelty (N)	Claims	2-10	YES																						
	Claims	1	NO																						
Inventive step (IS)	Claims		YES																						
	Claims	1-10	NO																						
Industrial applicability (IA)	Claims	1-10	YES																						
	Claims		NO																						
<p>2. Citations and explanations:</p> <p>1. In the present opinion, reference is made to the following documents:</p> <p>D1: ROCHAS A ET AL: "FIRST FULLY INTEGRATED 2-D ARRAY OF SINGLE PHOTON DETECTORS IN STANDARD CMOS TECHNOLOGY" IEEE PHOTONICS TECHNOLOGY LETTERS, IEEE INC. NEW YORK, US vol. 15, no. 7, July 2003 (2003-07), pages 963-965, XP001175854 ISSN: 1041-1135;</p> <p>D2: DE 102 10 737 A (GNOTHIS HOLDING SA ECUBLENS) 20 March 2003 (2003-03-20).</p> <p>2. <b>INDEPENDENT CLAIM 1</b></p> <p>The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 is not novel within the meaning of PCT Article 33(2). The document D1 discloses (see paragraphs I. and IV., and figure 1): a method for determination of luminescent molecules by optical excitation, for example a fluorescence-correlation spectroscopy method, having the steps a)</p>																									

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/EP2004/008847

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

and b), with emission radiation being captured by means of a position-resolving sensor matrix arrangement as in step c), and the signals are processed in accordance with step d).

3. CLAIM 7

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 7 is not based on an inventive step within the meaning of PCT Article 33(3):

The document D2 is regarded as the closest prior art to the subject matter of claim 7, and discloses (see paragraphs 4-11):

An apparatus for determination of luminescent molecules by optical excitation in confocal measurement volumes comprising, see D2, claims 28-32: features a), b) and d).

The subject matter of claim 7 thus differs from the apparatus known from D2 in that (step c):

the detection device has a sensor matrix which is integrated in a sensor chip connected in the Geiger mode.

The problem to be addressed by the present invention can thus be considered that of improving the apparatus from D2 such that the "correctly" occurring signals can be distinguished from those

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

signals which occur as a result of undesirable interference (crosstalk) from a plurality of marking groups.

The solution proposed in claim 7 of the present application, the use of a detection device according to step c), cannot be regarded as inventive for the following reasons (PCT Article 33(3)):

Figure 1 in D1 discloses a detection device according to step c).

A person skilled in the art would thus combine all of the features disclosed in D2 in D1 with one another without any inventive step in order to solve the stated problem. The solution proposed in the independent claim 7 can therefore not be regarded as inventive (PCT Article 33(3)).

The dependent claims 2-6 and 8-10 do not appear to contain any additional features which, in combination with the features of any claim to which it or they refers or refer back, meet the PCT requirements for novelty or inventive step, since all of the additional features are already known from the document D1 or D2.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

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Box No. VII      Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

1. Claims 1, 2, 7 and 9: with regard to the use of the expressions "in particular" and "preferably", see the PCT/GL/ISPE/1 5.40 guidelines.
2. Description page 2, lines 10-11, see the PCT/GL/ISPE/1 4.26 guidelines.